

1. Write a program to print the following pattern.

1

2 3

4 5 6

7 8 9 10

2. Write a python program to accept string and remove the characters which have odd index values of given string using user defined function.
3. Write a program to print whether a given number is Palindrome or not.
4. Write a Python function that accepts a string and calculate the number of upper case letters and lower case letters using user defined function.
5. Write a program to reverse a string using user defined function.
6. Write a Python program to check if a given key already exists in a dictionary. If key exists replace with another key/value pair.
7. Write a Python Program to Check if given number is prime or not. Also find factorial of the given no using user defined function.
8. Write a python script to define a class student having members roll no, name, age, gender. Create a subclass called Test with member marks of 3 subjects. Create three objects of the Test class and display all the details of the student with total marks.
9. Write an anonymous function to find area of square and rectangle.
10. Write Python script to create 2 text files. Enter data in each file and merge the data in the third file. (using function).
11. Create a list a = [1, 1, 2, 3, 5, 8, 13, 21, 34, 55, 89] and write a python program that prints out all the elements of the list that are less than 5.
12. Write a Python class which has two methods get_String and print_String. get_String accept a string from the user and print_String print the string in upper case. Further modify the program to reverse a string word by word and print it in lower case.
13. Write a Python program to accept n numbers in list and remove duplicates from a list.
14. Write a python script to define the class person having members name, address. Create a subclass called Employee with member salary. Create 'n' objects of the Employee class and display all the details of the employee.

15. Write a program that encrypts a message by adding a key value to every character.
16. Write a Python script using class, which has two methods `get_String` and `print_String`. `get_String` accept a string from the user and `print_String` print the string in upper case.
17. Write a python script to find the repeated items of a tuple.
`tup=(1,2,2,3,4,4)`
18. Write a python program to count repeated characters in a string.
Sample string: 'thequickbrownfoxjumpsoverthelazydog'
Expected output: o-4, e-3, u-2, h-2, r-2, t-2
19. Write a program to implement the concept of queue using list.
20. Write a python program to count number of upper case letters, small case letters, digits in the file.
21. Write a program that counts the number of occurrences of a character in a string using user defined function.
22. Write a Pickle python program to write and read a data from a file stating the position of the file object. (Using `dump()`, `load()` functions).
23. Write a Python script to generate and print a dictionary which contains a number (between 1 and n) in the form $(x, x*x)$. Sample Dictionary (n=5)
Expected Output: {1:1, 2:4, 3:9, 4:16, 5:25}
24. Write a file handling program in python, which opens the file 'report.txt' and write data into it. Use the `seek()` and `tell()` functions in python while reading the data from the file.
25. Write a python script to implement selection sort using list.
26. Write a python script to create a class `Rectangle` with data member's length, width and methods `area`, `perimeter` which can compute the area and perimeter of rectangle.
27. Write a Python program to convert a tuple of string values to a tuple of integer values.
Original tuple values: `(('44', '444'), ('1516', '45'))` New tuple values: `((44, 444), (1516, 45))`
28. Write a python program to fully reverse the contents of file and write it in another file.
29. Write a Python program to accept two lists and merge the two lists into list of tuple.
30. Write a python program to create a class `Circle` and compute the Area and the circumferences of the circle.(use parameterized constructor)

31. Write a Python script to sort (ascending and descending) a dictionary by key.
32. Define a class named Shape and its subclass Square. The subclass has an init function which takes an argument Length. Both classes should have methods to calculate area and perimeter of a given shape.
33. Write a Python program to unzip a list of tuples into individual lists.
L = [(1,2), (3,4), (8,9)]
34. Write Python program that has a class Person storing name and date of birth(DOB) of a person. Subtract the DOB from today's date to find out whether a person is eligible to vote or not.
35. Write a Python program to compute element-wise sum of given tuples.
Original tuples: (1, 2, 3, 4) (3, 5, 2, 1) (2, 2, 3, 1)
Element-wise sum of the said tuples: (6, 9, 8, 6) .
36. Define a class Employee having members id, name, department, salary. Create a subclass called manager with member bonus. Define methods accept and display in both the classes. Create n objects of the manager class and display the details of the manager having the maximum total salary (salary+bonus).
37. Write a Python script using class to reverse a string word by word.
38. Write a Python class named Student with two attributes student_name, marks. Modify the attribute values of the said class and print the original and modified values of the said attributes.
39. Program to print Fibonacci series using recursion.
40. Write a python program to print the contents of file in reverse order.